Claims

What is claimed is:

1. A method of servowriting in a disc drive having a head with an offset radially between a read element and a write element, the method comprising steps of:

(a) during an instance of a first sector position passing by the head, reading a first servo wedge on a first track with the read element; and

(b) during the instance of the first sector position passing by the head, and not during the reading step (a), writing a second and third servo wedge on a second track with the write element.

2. The method of claim 1 further comprising a step of:

(c) during one revolution of a disc of the disc drive, repeating the reading step (a) and the writing step (b) for all sector positions of the track.

3. The method of claim 1 further comprising a step of:

(d) prior to the reading step a) and the writing step b), writing, with a Servo Track Writer, servo wedges for a number of adjacent tracks greaterthan the offset between the read element and write element.

4. The method of claim 1 further comprising a step of:

(e) during the instance of the first sector position passing by the head, and not during the reading step a) or the writing step b), writing a fourth servo wedge.

5. The method of claim 1, further comprising a step of:

f) recording a head position determined from reading step a) relative to an ideal track center.

6. The method of claim 1, wherein the first servo wedge is read before the second and third servo wedges are written.

7. The method of claim 1, wherein the first servo wedge is read after the second servo wedge is written but before the third servo wedge is written.

8. The method of claim 1, wherein the first servo wedge is read after the second and third servo wedges are written.

9. The method of claim 1, wherein the reading step (a) comprises steps of:

a)(1) reading the first servo wedge before the second and third wedges are written;

a)(2) reading the first servo wedge after the second servo wedge is written but before the third servo wedge is written; or

a)(3) reading the first servo wedge after the second and third servo wedges are written; and wherein the method further comprises steps of:

(g) finding a head offset;

(h) performing the reading step a) and the writing step b) for all the sector positions on a track according to either the reading step a)(1), the reading step ~~a)(2), or the reading step~~ a)(3);

(i) seeking the head one track;

(j) repeating the performing step (h) and the seeking step (i) a set of repetitions equal to the head offset; and

(k) repeating the finding step (g) through the repeating step (j) for all tracks using the reading step a)(1), the reading step a)(2), or the reading step a)(3) but not the reading step a)(1), the reading step a)(2), or the reading step ~~a)(3)~~ used in an immediately preceding two sets of repetitions.

10. A disc drive that writes servo wedges, comprising:

one or more discs having a plurality of tracks divided into a plurality of sector positions;

a head having a read element and a write element separated by an offset radially;

a read/write channel in electrical communication with the read element and the write element, wherein during an instance of a first sector position passing by the head, the read/write channel reads a first servo wedge on a first track with the read element, and during the instance of the first sector position passing by the head and not during reading of the first servo wedge, the read/write channel writes a second and third servo wedge on a second track with the write element.

11. The disc drive of claim 10, wherein during one revolution of the one or more discs of the disc drive, the read/write channel repeats reading the first servo wedge and writing the second and third servo wedges for all sector positions of the track.

12. The disc drive of claim 10, wherein at least three servo wedges are located in each sector position for a number of adjacent tracks greater than the offset between the read element and write element.

13. The disc drive of claim 10, wherein during the instance of the first sector position passing by the head, and not during reading of the first servo wedge or writing of the second and third servo wedges, the read/write channel writes a fourth servo wedge for the first sector position.

14. The disc drive of claim 10, further comprising memory in electrical communication with the read/write channel, wherein the memory records a head position relative to an ideal track center determined from the read/write channel reading the first servo wedge.

15. The disc drive of claim 10, wherein the read/write channel reads the first servo wedge before writing the second and third servo wedges.

16. The disc drive of claim 10, wherein the read/write channel reads the first servo wedge after writing the second servo wedge but before writing the third servo wedge.

17. The disc drive of claim 10, wherein the read/write channel reads the first servo wedge after writing the second and third servo wedges.

18. The disc drive of claim 10, wherein the disc drive further comprises:

an actuator for positioning the head; and

a processor in communication with the read/write channel, the processor being configured to find a head offset from the read/write channel reading the first servo wedge, the processor being further configured to cause the actuator to seek the head one track after the second and third servo wedges have been written for all sector positions of a track, and further configured to cause the read/write channel to switch to a different order of reading and writing for each sector position after reading the first servo wedge and writing second and third servo wedges according to a first order for a number of tracks equal to the head offset.

19. A disc drive, comprising:

a head having a read element radially offset from a write element; and

means for writing servo wedges with the head for each sector position of a plurality of tracks of the disc drive.

20. The disc drive of claim 19, wherein the means for writing is configured to read a first servo wedge from a first track and write a second and third servo wedge to a second track during an instance of a first sector position passing by the head.

21. The disc drive of claim 20, wherein the tracks are located on one or more discs and wherein during one revolution of the one or more discs of the disc drive, the means for writing repeats reading the first servo wedge and writing the second and third servo wedges for all sector positions of the track.

22. The disc drive of claim 20, wherein at least three servo wedges are located in each sector position for a number of adjacent tracks greater than the offset between the read element and write element.

23. The disc drive of claim 20, wherein during the instance of the first sector position passing by the head, and not during reading of the first servo wedge or writing of the second and third servo wedges, the means for writing writes a fourth servo wedge for the first sector position.

24. The disc drive of claim 20, further comprising a memory in electrical communication with the means for writing, wherein the memory records a head position relative to an ideal track center determined from the means for writing reading the first servo wedge.

25. The disc drive of claim 20, wherein the disc drive further comprises:

an actuator for positioning the head; and

wherein the means for writing comprises a processor in communication with a read/write channel, the processor being configured to find a head offset from the read/write channel reading the first servo wedge, the processor being further configured to cause the actuator to seek the

head one track after the second and third servo wedges have been written for all sector positions of a track, and further configured to cause the read/write channel to switch to a different order of reading and writing for each sector position after reading the first servo wedge and writing second and third servo wedges according to a first order for a number of tracks equal to the head offset.